

Political Restrictions on Operational Fires in the Post World War II Environment

**A Monograph
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ABSTRACT

POLITICAL RESTRICTIONS ON OPERATIONAL FIRES IN THE POST WORLD WAR II ENVIRONMENT by MAJ John D. Dill, USA 42 pages.

This monograph asserts that the United States military conducted World War II with few restrictions on its firepower beyond those imposed by the International Rules of War. An unlimited war justified unlimited fires, including the strategic use of atomic bombs in August of 1945 to end the conflict. However, World War II proved an anomaly in the twentieth century as America reverted in the post war period to conducting limited wars. Absent a threat to national survival, policy makers ruled out the use of nuclear weapons as a serious option at the strategic level. At the tactical level, commanders had a full array of mortars, tube artillery, and air support. This closely replicated both the concept and effects of what was available to their World War II predecessors. Yet, in limited conflicts, the use of these weapons developed implications beyond their tactical battlefield effects.

The monograph examines how strategic policy makers shaped the battlefield for operational fires. At one extreme, the fear of escalation provided an upper limit for field commanders in Korea and Vietnam. At the lower end of the scale, fires previously considered solely tactical in nature had operational and strategic consequences. Stability and support operations (SASO) like the United States Marine Corps intervention in Beirut in the early 1980s came with limitations on commander's ability to employ operational fires. Commanders involved in SASO faced the difficulty of using their weapons without provoking charges of disproportionate response. The monograph also discusses the effect of increased connectivity of the global information environment. For commanders after the Korean War, the results of choices they made were instantly communicated to a worldwide audience. Thus, weapons previously thought to reside solely in the tactical arena now carried an operational, if not strategic, impact.

The monograph concludes by arguing that operational artists must be trained to be able to deliver operational fires despite strategic constraints. Operational fires are a critical asset to commanders. Eliminating their effect will significantly reduce the chance of obtaining the desired American end state.

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CHAPTER ONE

INTRODUCTION

Operational fires are a distinct battlefield system but they are not always clearly defined. Existing between the intuitively comprehended areas of tactical and strategic firepower, the boundaries of operational fires are blurred. Operational fires may use the same howitzers as tactical fires or the same airplanes that are normally associated with strategic bombing but they are unique. Given dissimilar settings, the same munitions have completely different effects. For example, using the battleship USS New Jersey's sixteen inch guns to provide naval gunfire support for marines in Vietnam had a tactical effect while using the exact same weapon fifteen years later off the coast of Lebanon achieved an operational effect. Even in the same conflict, one system can simultaneously have effects at different levels. B-52s striking in North Vietnam in 1968 had strategic effects while the same type planes bombing near Khe Sanh were pursuing operational goals. Thus, it is not a matter of what weapon the commander chooses to employ. The effects created and the ends supported define operational fires more than the means used.

Traditionally these effects were perceived as the realm of echelons above corps (EAC). Since the corps is the highest-level tactical unit, only echelons above this could theoretically provide operational fires. This view failed to account for the increased reliance placed on much lower levels of command to achieve

national policy, particularly in stability and support operations.¹ FM 100-15, Corps Operations also identifies the possibility that the Corps will conduct operational level activities, stating that in some circumstances, “They [Corps] have the key role of translating the broad strategic and operational objectives of higher echelons into specific and detailed tactics to achieve those objectives”.² Current U.S. Army doctrine supports this view by tying operational fires to effects not to a specific level of command, defining them as “The operational-level commander’s application of nonlethal and lethal weapons effects to accomplish objectives during the conduct of a campaign or major operation”.³ According to Doctor Vego of the Naval War College, the effects of operational fires sought by the commander include one or more of the following: 1. Facilitating operational maneuver of his force 2. Preventing or disrupting operational maneuver of the enemy force 3. Isolating the area of operations 4. Preventing the arrival of enemy reinforcements 5. Destroying or neutralizing the enemy operational reserve 6. Destroying or neutralizing the enemy’s critical functions and facilities and 7. Deceiving the enemy as to the sector of main attack.⁴

Doctrine further distinguishes operational fires from their tactical counterparts in that operational fires exist as an equal partner with maneuver while tactical fires, usually described as “fire support”, traditionally exist to support the maneuver

¹ Charles Hammond, *Operational Fires and Unity of Command*, Fort Leavenworth, Kansas. Army Command and General Staff College School of Advanced Military Studies 1990, 3

² United States. Headquarters, Department of the Army Field Manual 100-15. Operations (Washington, DC: 29 October 1996), 1-2

³ United States. Headquarters, Department of the Army Field Manual 3-0. Operations (Washington, DC: June 2000), 4-6

⁴ Milan N. Vego, The Theater Functional Area, United States Naval War College, 1995, 22

portion of the commander's plan.⁵ While Division Artilleries exist in the nether world between operational and tactical fires, the brigade level fire support plan practiced at the National Training Center is the quintessential example of tactical fires supporting, but not independent of, maneuver. Similarly, strategic fires exist to support the national level leadership's stratagems. However, they frequently exist completely independent of the maneuver plan. The United States' attack on Libya in 1986, Operation El Dorado Canyon, and the recent bombing campaign in Kosovo demonstrate the independence of strategic fires. Operational fires exist in this area in between supporting effort and complete independence. While they can have an independent operational objective, the commander obtains the best results when he utilizes them in conjunction with a maneuver plan.⁶

An operational commander has two methods of accomplishing his mission – maneuver and firepower. The first of these elements, maneuver, often has clearly defined and understood restrictions. For example, terrain prevents the use of armor in densely forested or mountainous regions. Similarly, it is not possible to cross a neutral countries' border without permission or a wider conflict will result. Finally, the enemy will certainly resist any attempt to cross into territory he controls. Thus, the restrictions on operational maneuver tend to be concrete and their effects are readily apparent.

However, the boundaries placed on operational fires are often less concrete and their effects are more subtle. Fires operate in three dimensions, frequently freeing themselves from topographical hindrances. At the operational level, a field

⁵ Jerry Garrett. Strategic Airpower as Operational Fires: Integrating Long Range Bombers into Campaign Design, Fort Leavenworth, Kansas. Army Command and General Staff College 1991, 11

artilleryman is indifferent to the type of ground upon which his rounds impact.

Pilots equipped with modern airplanes exhibit the same apathy about the ground they fly over on the journey to deliver their ordnance.

Thus, the only restrictions on the operational commander's ability to deliver fires are those developed by his enemy, those he imposes on himself, or those imposed on him by his strategic superiors. The enemy will of course, do everything in his power to limit his opponent's ability to deliver munitions. However, in the post World War II environment, American commanders have not had to cope with a robust enemy ability to counter their fires. Although enemy air defense systems have at times posed significant threats to American aircraft, ever since 1944 U.S. commanders have had the ability to bomb or shell their opponents almost at will. America's enemies have been limited to mitigating, not parrying, our operational fires. Moreover, it is inconceivable that a commander would fail to use all the tools available to him within the boundaries of the laws of land warfare to prosecute an operation. The one caveat to this is "tactical" nuclear weapons. Despite their name, "tactical" nuclear weapons have strategic consequences and field commander quickly learned this lesson after World War II.

Thus, if the enemy is usually ineffectual in deterring U.S. operational fires and it is highly unlikely that a commander would voluntarily neglect to use an effective weapon to win a campaign, then the primary curb on operational fires must come from restrictions imposed by higher, usually political, authorities on their own field commanders. Just as they place limits on the extent of ground maneuver to avoid widening a war and decreasing the chance of attaining

⁶ Field Manual 3-0, *Operations*: 4-6

American aims, they also limit fires in an attempt to increase the chances of achieving the desired end state. This leads to the primary research question of this monograph: Have political restrictions hampered operational fires in the post World War II era? To answer this question, several supporting questions must be resolved. The first of these involves analyzing significant or representative conflicts involving the United States since the Second World War. The monograph will use campaigns from the Korean conflict, Vietnam conflict, and the 1980's Lebanese intervention to accomplish this. The analysis will focus on how the operational commander envisioned using fires to achieve his ends and how political constraints inhibited or assisted his ability to do so.

The next question is what form these constraints took. According to FM 3-0, commanders operate in an operational framework shaped by

...the arrangement of friendly forces and resources in time, space and purpose with respect to each other and the enemy or situation. It consists of the area of operations, battlespace, and the battlefield organization. The framework establishes an area of geographic and operational responsibility and provides a way for commanders to visualize how they employ forces against the enemy. Commanders design an operational framework to accomplish their mission by defining and arranging its three components. They use the operational framework to focus combat power.⁷

Policy makers design rules of engagement (ROE), protected areas, and escalatory strategies to help achieve the strategic end state thus influencing the operational commander's ability to establish his framework. Even though the operational end state is subordinate to the strategic outcome, national level policy makers cannot work in a vacuum and it is important to examine the effect of their policies. Were they unnecessarily restrictive, placing the commander in a strait

⁷ Field Manual 3-0, *Operations*: 4-18

jacket or did they create a synergistic effect leading to the overall accomplishment of national goals and objectives? It is also important to evaluate how these policies evolved with time. Did policy makers effectively integrate the “lessons” of each conflict into the next crisis? The monograph will also examine how technology changed the way strategic echelon leaders influenced the conduct and restrictions on operational fires. Finally, the monograph will assess current training on operational fires to determine if operational art instruction places enough emphasis on identifying and minimizing the potential limits derived from strategic constraints.

Chapter 2

KOREA: DECEMBER 1950 - APRIL 1951

The Korean War was the first major test of arms for the American military after World War II. Initially, there were few restrictions imposed from Washington on the forces defending the Republic of Korea. The operational framework for the conflict was unlimited within the Korean peninsula and resembled the structure of a World War II operation. This meant that the theater of war and theater of operations were congruent. Although LTG Walton Walker initially commanded the tactical ground forces in the Eighth Army, General of the Army Douglas MacArthur directed both the operational and theater strategic levels of war from Tokyo. This was a function of the desperation of the situation in the summer of 1950 and of the towering prestige of the United Nations forces' commander. MacArthur's role as a victorious theater commander in World War II and as the American Proconsul in Japan after the war made him invulnerable to criticism and to constraints imposed from Washington. He enhanced his freedom to act by brilliantly developing and executing Operation Chromite, the landings at Inchon in September 1950. To stateside observers, it appeared that MacArthur had spectacularly caused the defeat of the North Korean Peoples' Army with an amphibious assault that operationally and strategically defeated the enemy. United Nations' forces enhanced his reputation over the next two months as they drove north to the Yalu River, almost clearing the peninsula of the NKPA. It appeared as a superb example of operational art with the defeat of the NKPA, supporting the strategic end state, South Korea defended and the Korean land mass reunified.

Afterwards, no strategic policy makers attempted to impose any restrictions on the General's actions.⁸ Indeed, the new Secretary of Defense, former General of the Army George Marshall instructed MacArthur on September 29 1950 "We want you to feel unhampered strategically and tactically to proceed North of the 38th parallel."⁹ MacArthur attempted to repeat his operational success by landing X Corps, commanded by his Chief of Staff, Major General Ned Almond, on the Eastern side of the peninsula.¹⁰ This further divided the tactical command of land forces and kept operational control firmly in MacArthur's grasp.

This unrestricted freedom of action ended as the operational framework changed with the November 1950 intervention of Communist Chinese Forces (CCF) across the Yalu. MacArthur's dismissal of the Chinese threat discredited his freshly burnished military reputation. With UN forces in full retreat before the Chinese onslaught, the specter of a third world war suddenly loomed large in Washington's view. The rapid enemy advance renewed the possibility of an American defeat and the necessity for a Dunkirk like operation. Faced with a war with the People's Republic of China (PRC), policy makers changed the desired strategic end state. Instead of reunification, MacArthur was instructed by the Joint Chiefs of Staff (JCS) on December 29 1950 that

We believe Korea is not the place to fight a major war...However, a successful resistance to Chinese-North Korean aggression at some position in Korea and a deflation of the military and political prestige of the

⁸ D. Clayton James, *Command Crisis: MacArthur and the Korean War* (Harmon Memorial Lecture, Colorado Springs: United States Air Force Academy 1982), 8

⁹ Allan Guttman ed. *Korea and the Theory of Limited War*, (Lexington, Ma: D.C. Heath and Co., 1967), 9

¹⁰ Russell Weigley, *The American Way of War*, (Bloomington, Indiana; Indiana University Press, 1973), 387

Chinese Communists would be of great importance to our national interests, if this could be accomplished without incurring serious losses.¹¹

Truman and his advisors saw Korea as a sideshow to the possibility of a decisive conflict with the Soviet Union in Europe. In fact, some worried that Korea was a deliberate feint to bleed American troops away from a conventional Soviet attack on Europe. Thus, Washington believed MacArthur's pessimistic reports but opposed his desire for a wider war. MacArthur's demands in response to the JCS message positioned him in opposition to the Truman administration's strategy. The President and his advisors denied MacArthur's requests to enlarge the theater of war and refused to alter the rules of engagement that the General found restrictive and believed endangered his forces. In particular, they refused his petition to support an invasion of China by nationalist Chinese forces, use the U.S. Navy to blockade the Chinese coast, bomb targets in China including air defense sites and air bases, and restricted aerial attacks to the southern, i.e. North Korean, ends of the Yalu bridges. Finally, they refused permission for planes to over fly Chinese territory while bombing the Yalu bridges, a limitation that greatly complicated the task for pilots flying over the twisting and convoluted river.¹² These boundaries on the commander were a change from the practice of unconditional warfare practiced by General U.S. Grant in the American civil war, continued in the Indian Wars, and strengthened in World War II.

Two other events also altered the battlefield at this time. LTG Walton Walker's death in a vehicle accident on December 23 1950 brought LTG Matthew Ridgeway to lead the Eighth Army. In his meeting with MacArthur in Tokyo before

¹¹ Bevin Alexander, *Korea the First War We Lost*, (New York: Hippocrene Books, 1993) 377

assuming command, the theater commander told Ridgeway “Eighth Army is yours, Matt. Do what you think is best”.¹³ In addition, at this time, X Corps completed its withdrawal from the east side of Korea and collocated with the rest of Eighth Army. The new commander, Ridgeway, wasted no time in ensuring that Almond knew that he would follow Ridgeway’s orders and that his special relationship with the Tokyo headquarters was finished.¹⁴

The unification of the ground forces under a single commander with freedom to act meant that Ridgeway, not MacArthur, was now the operational level commander. It was his job to accomplish his mission despite the restraints imposed by Washington and labeled by MacArthur as having “[a] disastrous effect, both physical and psychological...”¹⁵ Ridgeway began immediately, sensing that his command believed MacArthur’s view. He had arrived in Korea from Washington where he had spent a year as the Army Deputy Chief of Staff for administration. There he had been privy to the highest councils and clearly understood national strategic picture.¹⁶ In this, he was much better informed than his superior who had last visited the United States before World War II. Ridgeway knew that, whatever his personal desires, taking the war to the Chinese mainland was out of the question. His first impulse was to end Eighth Army’s long retreat and begin an offensive, to regain contact with the CCF in order to determine their position and composition. He also understood how to operate within the bounds of

¹² James, *Command Crisis: MacArthur and the Korean War*, 2

¹³ D. Clayton James, *The Years of MacArthur Volume III 1945-1964*, (Boston; Houghton Mifflin Company, 1985), 546

¹⁴ Clay Blair, *The Forgotten War: America in Korea 1950-53* (New York: Anchor Books, 1987), 573

¹⁵ James, *The Years of MacArthur Volume III 1945-1964*, 522

¹⁶ James, *Command Crisis: MacArthur and the Korean War*, 7

political constraint. If he could not go to the enemy, he would make the enemy pay so high a price for attacking that they would call off their attack. Thus, unlike the great crusade to liberate Europe in World War II, he proclaimed, “We are not interested in real estate, we are interested only in inflicting maximum casualties on the enemy with minimum losses to ourselves”.¹⁷ He then prepared to meet the anticipated enemy New Year offensive.

Ridgeway shaped his operations to maximize the use of artillery and air power. Unlike the grand double envelopment envisioned by MacArthur just two months earlier, Ridgeway moved the Eighth Army in a linear formation stretching across the width of Korea. By doing so, he ensured that the Chinese could not flank his forces and that the maneuver elements protected his artillery. He also requested and received five additional field artillery battalions to immediately enhance his ability to chew up the enemy. Finally, he realized that he could trade space for time and established prepared lines of resistance behind which his soldiers could delay the Chinese attack and bleed the enemy dry. Once the Chinese attack faltered, Ridgeway planned to counter attack, again using fires to achieve the aim of killing the maximum numbers of CCF soldiers. As he wired MacArthur on 3 January 1951 “The Eighth Army will continue in its present mission of inflicting maximum punishment and delaying in successive positions maintaining its major forces intact.”¹⁸

Evaluating Ridgeway’s efforts according to Dr Vego’s criteria, the General focused on three of the seven possible aims for his operational fires. He tasked his

¹⁷ David Rees, *Korea, the Limited War*, (Baltimore Md., Penguin Books, 1964) 178

¹⁸ Blair, *The Forgotten War: America in Korea 1950-53*, 600

organic artillery, Far East naval assets, and the Far East Air Force (FEAF) to disrupt operational maneuver of the enemy force, isolate the area of operations, and prevent the arrival of enemy reinforcements. His apportionment of air assets best illustrates his guidance. FEAF Bomber Command was to spend one-fourth to one-third of its effort in attacking rail targets while allocating the rest to striking towns near the front lines that contained enemy troops and supplies. Using his guidance, fires accomplished the first task very well while the other two were not completely accomplished.

Fires realized the disruption of operational maneuver in conjunction with ground forces. In two defensive battles around Wonju, Ridgeway's men stopped the Chinese attempt to rupture Eighth Army's front. Wonju was a key intersection that controlled the line of communication between the East and West coasts of Korea. At the first battle of Wonju in mid January, the 2d Infantry Division counter attacked to reclaim this key road junction. Although it was Colonel Paul Freeman's 23d Infantry Regiment assisted by the 38th Infantry, French, and Dutch troops regained the ground, fires made this possible. Before these troops entered the town, artillery and air support controlled Wonju. As early as 10 January, the town was in range of the 38th Field Artillery Battalion¹⁹. Additionally, on 12 January ten B-29s flew a strike against the town. However, from an operational point of view, what sealed the fate of the communists attempting to take the town was the ability of American air to protect the flanks of committed units²⁰. Thus,

¹⁹ Roy Appleman, *Ridgeway Duels for Korea*, (College station, Texas, Texas A & M University Press, 1990) 122

²⁰ Robert Futrell, *The United States Air Force in Korea 1950-1953*, (Office of Air Force History, Washington, D.C. 1983) 280

the capacity of USN and USAF fighters to prevent enemy from moving large bodies of men to envelope the 2d Infantry Division positions sealed the fate of the those trying to hold the junction.

Almost exactly one month later, the Chinese made another attempt to seize Wonju as part of their Fourth Phase Offensive. Fires shaped the battle early and disrupted enemy maneuver when USAF observation planes discovered an estimated two divisions of Chinese troops in the open moving towards the town. Four artillery battalions responded, killed an estimated 3000 to 3500 of the enemy, and caused the remainder to turn and head north²¹. This effective use of fires known afterwards as the “Wonju Shoot” did not prevent an attack on Wonju, but did prevent the enemy from enveloping it and contributed to the Chinese offensive’s culmination in February of 1951. After this effort, Eighth Army was able to advance back to the North behind a screen of air and artillery high explosives. By spring, it had regained the 38th parallel and established a solid defensive line, thus setting the stage for a negotiated settlement.

The restrictions placed on the Korean effort by the President and JCS did not significantly hamper Ridgeway in his attempts to restrict the operational maneuver of the opposition. This movement was located south of the Yalu, thus fully exposing the Chinese forces to American airpower. For the first time in the war, artillery was present in adequate numbers and types to achieve maximum results. This was a function of not only the early arrival of five additional battalions of National Guard guns, but also of the change in the scheme of maneuver.

²¹ Appleman, *Ridgeway Duels for Korea*, 304

Ridgeway created a linear battlefield and made his commander's stem the loss of artillery that had plagued U.N. forces earlier in the war.²²

The other two tasks for Ridgeway's fires were both related and less easily accomplished. Isolating the area of operations and preventing reinforcements from arriving meant in practical terms cutting roads, bridges, railroad tracks, and other lines of communication (LOCs). These LOCs ran from Manchuria in northeast China to the front lines along the 38th parallel – a distance of approximately 350 miles. American air and naval gunfire destroyed almost all the bridges in North Korea, cratered railroad tracks, and attacked truck convoys whenever they were discovered. Ultimately, however, the effort failed to isolate the battlefield. The communist forces were able to overcome the air power advantage. The rudimentary nature of the logistics system aided the enemy in this effort. Chinese and North Korean laborers were usually able to repair damage very quickly after an attack. If not, they called upon the mass of manpower available at their disposal to bypass the broken conduit. This involved loading and unloading supplies multiple times, but the effort was worth it to the leadership intent on supplying the front.²³ The net effect was that the Chinese were able to slowly build up a cache of supplies capable of supporting an attack. However, they could not re-supply fast enough to sustain that attack and make it decisive.

Similarly, the Chinese circumvented air power's attempt to prevent reinforcements through discipline and huge manpower resources. The Chinese marched their replacements from the border with North Korea, dispersing and

²² Blair, *The Forgotten War: America in Korea*, 577

²³ Futrell, *The United States Air Force in Korea 1950-195*, 399

hiding them by day. The march instructions of the 60th CCF Army reveal how enemy evaded air attack:

Attention must be paid to air defense methods by all units during the march and after entering the bivouac area. Personnel, animals, and vehicles must be dispersed, concealed, and camouflaged. No smoke or reflecting object will be exposed during the day. At night, all fires and lights are strictly prohibited...²⁴

While air power could not prevent reinforcement, it did attrit units, lowered the combat effectiveness of those soldiers who made it to the front, and prevented rapid redeployment of units once the counter offensive started. In this partial success, it greatly aided the Eighth Army's successful counter offensive.

It is important to examine whether strategic restrictions were responsible for the lack of complete success in achieving the twin objectives of isolating the area of operations and preventing reinforcements. MacArthur and his defenders argued in particular that the prohibition against bombing the Yalu bridges allowed the CCF to stream across into North Korea. In addition, the restriction on bombing Manchuria supposedly created a sanctuary from which the CCF could operate. Blaming these restrictions ignores the facts of the battlefield. The CCF had already moved into the central mountains of Korea before its offensive. Additionally, while Ridgeway was taking command, the Yalu froze solid, making the bridges irrelevant. Once the river thawed, FEAF B-29s were able to drop the spans, albeit with more difficulty due to the prohibition on overflying Chinese airspace. As to bombing Manchuria, USAF fighters did not have the range to escort B-29 bombers into China. This problem was compounded in January of 1951 when most FEAF air assets relocated to Japan due to concerns over airfield

²⁴ Appleman, *Ridgeway Duels for Korea*, 379

security. Finally, China possessed the MiG-15 – a fighter superior to anything the USAF had in theater at the time. It is hard to envision a successful bombing campaign under these circumstances.

The strategic restrictions on operational fires in Korea did not significantly hamper Ridgeway's operations. His fires assets blocked enemy operational maneuver, and significantly degraded the CCF's ability to move additional assets to the battlefield. They also had a synergistic effect with the tactical fight in that they helped kill thousands of Chinese soldiers. Ridgeway knew that ultimately, the manpower pool would run dry, even for China. Fires helped him achieve this goal thus setting the stage for the strategic objective of establishing a truce in Korea along the lines that existed before the war. However, Ridgeway's success with fires masked potential problems with setting limits on operations. He successfully prosecuted a war of attrition because of the nature of the terrain, the enemy, and the predominance of conventional battles. Fifteen years later, events in Vietnam would show how applying these lessons on operational limits could cause strategic failure and place Americans in greatly increased jeopardy.

Chapter 3

VIETNAM 1965-1968

Just over a decade after the uneasy truce made possible by superior American firepower silenced the fighting in Korea, the United States found itself on the cusp of another conflict in Asia in Vietnam. To President Lyndon Johnson and Secretary of Defense Robert McNamara, the battlespace resembled Korea and the

policy makers reacted accordingly. To them, Vietnam represented another attempt by a monolithic worldwide communist conspiracy led by the Soviet Union and the Peoples' Republic of China to topple a friendly government and achieve victory without risking direct military confrontation. In April of 1965, Johnson directly linked Vietnam to Korea, declaring:

Over this war—and all Asia—is another reality: the deepening shadow of Communist China. The rulers in Hanoi are urged on by Peiping. This is a regime which has destroyed freedom in Tibet which has attacked India, and has been condemned by the United Nations for aggression in Korea. It is a nation which is helping the forces of violence in almost every continent. The contest in Vietnam is part of a wider pattern of aggressive purposes.²⁵

Unfortunately, Johnson and his strategists failed to perceive the significant differences between the Korean and Vietnamese conflicts. These differences in the operational framework included battle space, the nature of the conflict, and technology.

Significant differences in the geography of the Southeast Asian peninsula devalued the lessons learned from the Korea War. The foremost difference is that unlike South Korea, which borders only one country, Vietnam touches three countries, China, Laos, and Cambodia. This complicated the political and therefore, the operational problem. Johnson, like Truman before him, ruled China off limits to U.S. military actions. However, Truman's strategic restriction largely mirrored one imposed by technology. In 1951, the range limitations of the fighter planes meant that it was impossible to escort bombers very far into China itself. The CCF Air Force would have decimated unescorted B-29 bombers. Thus, the President's refusal to allow bombing north of the Yalu in 1951 did not represent a

²⁵ Colonel Dennis Drew, *Rolling Thunder 1965: Anatomy of a Failure*, (Maxwell AFB, Alabama, 1986), 8

considerable loss of operational area. Yet, Truman did allow his commanders to attack targets in North Korea without limitation. This meant that the enemy exposed his supply lines to U.S. operational fires from the time they left the Chinese sanctuary until they reached his front line forces. In contrast, Johnson prevented this by placing Laos and Cambodia off limits to overt military action by the Military Assistance Command Vietnam (MACV) despite the certainty of American air superiority over both of these countries. While commanders in both conflicts had to deal with a Chinese sanctuary, Johnson's additional geographical restrictions meant that he restrained the local commander, General William Westmoreland's, area of operations more severely than Truman did MacArthur's and Ridgeway's area. The enemy in Vietnam did not face similar restrictions about using Cambodia and Laos and the communists established a network of re-supply routes in both countries, outflanking American interdiction efforts. These routes, known as the Ho Chi Minh trail, allowed the enemy to bypass the combat zone where his supplies were vulnerable to interdiction by both maneuver elements and fires. Thus, Westmoreland's forces had to cut off provisions after they flowed through the North Vietnamese, Laotian, and Cambodian borders.²⁶

Vietnam's topography assisted in the Viet Cong's effort to move supplies undetected. The coastline of the Mekong delta offered innumerable places to smuggle supplies while the jungle covering much of the rest of the country hid movement from aerial discovery. Mountainous highlands impaired interdiction attempts. Poor flying weather frequently grounded U.S. attack planes. Finally, the lines of communication were primitive. Aside from a few prominent bridges, the

²⁶ John Pimlott, *Vietnam, the Decisive Battles*, (New York, MacMillan Publishing Company, 1990), 158

transportation net, especially on the Ho Chi Minh trail, consisted of dirt roads easily repaired with shovels. Thus, U.S. and allied forces found it very difficult to effectively cut enemy supply lines

Washington imposed additional geographic restrictions around politically sensitive target areas in the area of operations. Driven by the desire to avoid involving the Soviet or Chinese supporters of North Vietnam, the President would not allow the Air Force to bomb a long list of areas and targets from 1965 to 1968 without permission. This list included populated areas, MiG airfields, locks, dams, surface to air missile sites, power plants, fishing boats, houseboats, naval craft in certain areas, targets within 30 miles of the Chinese border or Hanoi, and within 10 miles of Haiphong Harbor.²⁷ Aircrews who violated these rules faced severe punishment.²⁸ These restrictions were widely known and the North Vietnamese and Viet Cong were quick to take advantage of them. They positioned anti aircraft positions on dikes and dams. The enemy dispersed critical infrastructure or moved it to sanctuary areas. Most valuable of all was the unfettered ability to receive supplies from the Soviet Union and the PRC through Haiphong Harbor. Operations there continued twenty-four hours a day. Thus, imports replaced what North Vietnamese industry, limited in capability even before the bombing began, could no longer produce.

The nature of the conflict also invalidated many of the lessons learned from Korea. The Korean War was a conventional conflict with a recognizable front line while Vietnam contained elements of a conventional conflict, guerilla war, and

²⁷ Major Ricky Drake, *The Rules of Defeat*, (Maxwell AFB, Alabama, Air University Press, 1993), 5

²⁸ Kenneth Bell, *100 Missions North*, (McLean, Virginia, Brassy's, 1993) 288

civil war entwined in a complex knot. For Ridgeway, interdicting enemy supplies had an immediate payoff, as the CCF was unable to respond to Eighth Army offensives. In addition, the CCF's limited re-supply capability meant that they could not sustain an attack long enough to defeat UN forces. Westmoreland's problem was more complicated. The Viet Cong in South Vietnam needed very few supplies to wage their campaign. They also held the initiative as they could retreat or dissipate into the countryside in the face of a conventional attack. The civil war in South Vietnam meant that unlike Ridgeway, Westmoreland's forces did not have a secure rear area. Finally, the enemy's timetable for victory was much longer than the United States'. The communists could lay quiescent while supplies slowly accumulated and until regular army battalions were elsewhere combating conventional North Vietnamese forces. Thus, cutting off stores for the Viet Cong represented at best a marginally effective strategy.

Responding to this new threat, the United States faced a quandary over its strategic policy goals. Wary of excessive ambition and desiring minimal American involvement, policy makers limited U.S. war aims. Unlike the early days in Korea, there was no consensus for trying to unify South and North Vietnam. Instead, the President articulated the objective of U.S. policy as, "...the independence of South Vietnam and its freedom from attack.... we will do anything necessary to reach that objective, and we will do only what is absolutely necessary."²⁹ The concerns over widening the war by involving the Chinese and / or the Soviets and in limiting American involvement shaped the operational framework for the theater commander, Admiral Ulysses S. Grant Sharp and

Westmoreland. The influence of these limits would continue until, paradoxically, the American decision to gradually withdraw from the conflict after the Tet Offensive in 1968.

Geographic restrictions and limits on target types were not the only constraints imposed on the military. Johnson distrusted the military intensely. As he saw it, the military mindset did not allow for anything other than a military solution³⁰. He was determined to not let the Generals run the war. Thus, the White House strangled the targeting process itself through excessive oversight. Because of the perceived extreme political sensitivity of bombing in North Vietnam, Lyndon Johnson threw himself into the targeting process. The role of commanders on the scene in Vietnam changed from picking targets to recommending targets. MACV then sent the recommended target list to Admiral Sharp's headquarters in Hawaii where Pacific Command staffers reviewed it and forwarded it to Washington. There the list endured scrutiny by Pentagon personnel for its military implications and by the State Department for possible international impact. Finally, the Pentagon delivered the "approved" target recommendations to the White House for the final decision.³¹ This tangled path resulted in a slow, bureaucratic process and the result often bore little resemblance to what the commanders in the field desired.

Finally, international political considerations caused Johnson to restrict the military from using B-52s in the opening stages of the air war. The law of land warfare is based on the principle of proportionality – reactions must not greatly

²⁹ Ibid, 11

³⁰ Drew, 35

exceed an opponent's actions. Johnson feared a backlash from both allies and potentially the PRC and Soviet Union if the United States committed its premier heavy bomber to the fight. He did not want to encourage the image of the world's most advanced superpower bullying a third world nation.³² Technology had changed the battlefield as the development of the media's ability to report in near real time to a world wide audience changed what FM 3-0 refers to as the information environment³³. Obliterating cities with B-52s would have created associations with World War II strategic bombing and total war. To try to preserve the image of proportionality with both domestic and international audiences, Johnson had to portray the U.S. as fighting a limited war using less than its total capacity. Thus, political constraints forced the USAF to use smaller fighter-bombers like the F-105 and the F-4 to attack targets over North Vietnam. This required more sorties per target as the planes carried a smaller bomb load than the heavy bombers, decreasing the chances of effectively destroying targets, and placed Americans at greater risk of being shot down. Later in the war the development of precision-guided munitions mitigated, but did not eliminate, this risk.

In 1965, Washington believed that the South Vietnamese were nearly finished in the field and that increased American involvement was required to forestall defeat. McNamara gave the Joint Chiefs of Staff three requirements. According to Drake, these were, "raising the moral of the South Vietnamese, reducing the flow

³¹ Ibid, 35

³² LTC Stephen Randolph, *Rules of Engagement, Policy, and Military Effectiveness: The Ties That Bind*, (Maxwell AFB, Alabama, 1993) 5

³³ FM 3-0, 4-21

and increasing the cost of sending men and materials from North Vietnam to South Vietnam, and making it clear to the leaders of North Vietnam that they would pay a high price for continuing their action.”³⁴ The first and third objectives were traditional strategic bombing goals, but, according to Dr. Vego’s definitions, reducing the flow of men and materials lies at the heart of operational fires. Still, planners had to work within strategic restrictions, with particular attention to the goal of avoiding a Chinese attack. The Yalu River memory was very much alive in 1965.

What emerged as an answer to McNamara’s request was a list of 94 targets that the Joint Chiefs of Staff envisioned destroying in an air campaign of four to eleven weeks in length. However, the small size of North Vietnam’s industrial base meant that there were few strategic targets to hit. The U.S. civilian leadership, eternally attempting to accomplish the mission with the least expenditure of American resources, decided to draw out the campaign. They hoped that the North Vietnamese would come to the conclusion that they could not win the war and capitulate, rather than make the U.S. commit enough forces to compel them to do so. Washington also chose to try to employ fires alone rather than combining them with maneuver to achieve a synergistic effect. They ruled out most of the strategic targets as “hostages” to North Vietnamese good behavior. The remaining targets were largely involved in supplying the war effort in the South. Thus, an operational level bombing campaign was born in response to a strategic problem. They called it called Rolling Thunder.

³⁴ Drake, 3

Rolling Thunder began in March 1965 after a two-week delay caused by political instability in Saigon. Initial targets ranged from an ammunition depot to radar sites and barracks. Yet, by April 1965, the program focused on interdicting North Vietnamese lines of communication to the South. The JCS submitted a twelve-week program of interdicting the lines of communication to the South, similar to that which destroyed North Korea's rail system, to McNamara for approval. McNamara imprinted the plan with his own logic and instead of a comprehensive campaign to shape the battlefield in the South where U.S. troops were beginning to directly engage in ground combat, the Secretary of Defense approved assailing a mishmash of individual targets³⁵.

The decision process on two key bridges demonstrated the military illogic of the situation. In the spring of 1965, both the Thanh Hoa Rail and Highway Bridge and the Paul Doumer Bridge were critical nodes in North Vietnam's supply system to the guerillas in the South. At this point North Vietnam had not developed the Ho Chi Minh trail into the extended and resilient transportation net that it would become later in the war.³⁶ Therefore, they still relied on conventional means of conveyance like trains and trucks located in North Vietnam. The 8,467 foot long Paul Doumer Bridge, located just outside Hanoi, was where the rail lines running from the northern portion of the country – and the Chinese supply sanctuary – met and crossed the Red River. Destroying it would severely inhibit the ability of the PRC to support their allies³⁷. Likewise, the Thanh Hoa Bridge, known as “The

³⁵ Colonel W.H. Parks, “Rules of Engagement: No More Vietnams”, Proceedings (March, 1991): 27

³⁶ John Collins, “Going to Tchepone: OPLAN El Paso”, Joint Forces Quarterly (Autumn-Winter 1997-98):

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³⁷ Ibid, 8

Dragon's Jaw" was also a logistics chokepoint. Located further south and much shorter (540 feet) than its northern cousin, the North Vietnamese constructed it with a massive amount of reinforced concrete. However, the critical center section carrying the railroad tracks was only 12 feet wide. This made the span an extremely challenging and durable target. Despite the similar nature of the two targets, Washington put the Doumer Bridge off limits for much of the Rolling Thunder campaign because of its proximity to Hanoi. This impeded the interdiction campaign. However, the policy makers allowed the USAF and USN to attack the Thanh Hoa connection.

Despite giving the green light to attack the southern node, Washington's demand to use only fighter-bombers precluded achieving the desired effects. The first attempt at dropping the bridge with these platforms had negligible effects. The Air Force slated 79 aircraft to attack the bridge. Thirty-three planes were in support roles while the remaining forty-six attack planes carried a mixture of Bullpup missiles and 750 pound bombs. Pilots soon discovered that attacking the hulking structure with Bullpup missiles was "about as effective as shooting B-B pellets at a Sherman Tank."³⁸ Although the remaining 240 bombs did cause damage, they lacked both the accuracy and size to destroy the bridge. All together, this strike by 79 planes packed less punch than three B-52s. Additionally, the F-105s had to dive into small caliber air defense guns to drop their bombs. At this point in the war, the North Vietnamese lacked the missiles that could challenge B-52s conducting high altitude bombing. The Dragon's Jaw remained in operation despite repeated USAF attempts to destroy it. Although the Doumer Bridge lacked

the thick abutments that protected the Dragon's Jaw, misguided strategic restrictions gave it even more effective protection than the concrete of its southern counterpart. Late in the war, after the development of the Ho Chi Minh trail as an effective bypass, both structures succumbed to laser guided bombs and an easing of restrictions.

Given the enemy's minimal supply requirements, it is unlikely that an unfettered interdiction campaign in North Vietnam could have completely stopped the Viet Cong and North Vietnamese activity in South Vietnam. However, the net effect of the restrictions on fires was to make the task for ground forces in South Vietnam much harder. General Westmoreland saw the Rolling Thunder campaign as the offensive arm of the overall strategy, while ground operations in the South were defensive in nature. In his view, he was limited because

Our national policy of confining the ground war precluded operations across the Cambodian border where the enemy frequently sought sanctuary, north of the Demilitarized Zone where the enemy ultimately massed troops, and into southeastern Laos through which ran the enemy's main route of logistic support. These restrictions made it impossible to destroy the enemy's forces in a traditional or classic sense.³⁹

Westmoreland attempted to solve his dilemma the same way that Ridgeway dealt with the CCF in Korea. He continued Rolling Thunder's attacks on enemy logistics despite their marginal effect and engaged in a war of attrition. Like Ridgeway, Westmoreland attempted to use operational fires to bleed the enemy white. However, this time the American public's tolerance for casualties ran out

³⁸ Ibid 36

³⁹ General W.C. Westmoreland, *Report on Operations in South Vietnam*, (Washington, U.S. Government Printing Office, 1968) 292

before the enemy's did. This culmination occurred when operational fires were exerting their maximum effort of the war in early 1968 at Khe Sanh.⁴⁰

The desire to destroy enemy logistics and soldiers lay behind the decision to establish Khe Sanh as a strong point near the demilitarized zone. Originally created as a Special Forces Camp, Khe Sanh's purpose changed in April of 1967 when two battalions of Marines occupied the plateau on which the camp sat as well as the hills surrounding it. From this location, MACV felt that the Marines could interdict enemy supplies moving to the south across the DMZ and east from Laos. Westmoreland also thought that the base could serve as bait for his opponent, North Vietnamese General Giap. He hoped to portray the situation at Khe Sanh as a duplicate of the one Giap had successfully mastered at Dien Bien Phu and entice him into sending large numbers of troops against the base. However, Westmoreland believed that overwhelming American fires could ravish Giap's formations.

For operational fires, the tasks at Khe Sanh included: disrupting operational maneuver of the enemy force, isolating the area of operations, preventing the arrival of enemy reinforcements, and destroying the enemy operational reserve. To this end, the MACV provided the base's defenders with unprecedented fires. Named Operation Niagara, this was a concerted effort to use fires to prevent the enemy from taking the post. At the tactical level, this consisted of mortars, 105mm, and 155 mm howitzers located within the confines of the Khe Sanh perimeter. Outside the perimeter, U.S. Army 175mm guns with a range of 35

⁴⁰ Benjamin Lambeth, *The Transformation of American Air Power*, (Ithaca, New York, Cornell University Press, 2000) 22

kilometers provided general support from the firebases at Camp Carroll. These guns participated in “mini arc light” missions, an attempt to duplicate on a smaller scale and closer to the perimeter, the effects of B-52 strikes. Aerial fires utilized everything that would fly to support Khe Sanh. This included helicopter gunships, tactical fighter-bombers, and B-52s. At the height of the battle, the enemy attempting to overrun Khe Sanh suffered from the effects of three B-52s every ninety minutes. These strikes delivered over 300 500 to 750 pound bombs. With the perfection of radar bombing, they were able to deliver their payloads through clouds and dark. Code-named “Arc Light”, the B-52s were targeted against troop concentrations and supply depots.⁴¹ The B-52s were the heaviest element of an effort that delivered over 100,000 tons of bombs and 150,000 artillery rounds between January 22 and March 31 1968.

The fight for Khe Sanh commanded attention at the highest levels. It became a symbol of the U.S. effort in Vietnam. Johnson was obsessed with it and had a sand table set up in the White House so he could track the battle.⁴² Westmoreland claimed that he personally reviewed every B-52 strike.⁴³

Khe Sanh’s location freed it from many of the restrictions imposed on operational fires in other parts of Vietnam. It was in South Vietnam so there were no protected sanctuaries. There were no large concentrations of civilians to inhibit fires. The United States used all weapons short of nuclear weapons. Indeed, the Chairman of the JCS, General Earl Wheeler, asked Westmoreland if he envisioned the possibility of using tactical nuclear weapons. However, Westmoreland kept

⁴¹ Moyers Shore, *The Battle for Khe Sanh*, (Washington, D.C. U.S. Government Printing Office, 1969) 101

⁴² Larry Berman, *Lyndon Johnson’s War*, (New York, W.W. Norton Company, 1989) 142

the stopper on the nuclear genie's bottle by replying that he did not think that he needed nuclear weapons "in the present situation."⁴⁴ The concentration of conventional firepower caused an estimated ten thousand casualties among the enemy soldiers in the two divisions trying to reduce Khe Sanh. Freed from the shackles chaining its sister operation, Rolling Thunder, Operation Niagara effectively achieved the commander's goal of disrupting and destroying enemy reserves. However, it failed to interdict the transportation network, as the enemy was able to build additional roads through Laos, bypassing the area controlled by Khe Sanh. After breaking the siege, U.S. forces soon withdrew from the base.⁴⁵ Thus as a whole, the Khe Sanh campaign was a failure. Yet, the campaign did demonstrate that fires, when unhampered, could serve as the main effort in accomplishing the commander's intent. However, the enemy's Tet offensive overshadowed this success. Despite U.S. and South Vietnamese tactical victories, Tet spelled the end for large U.S. ground operations and the operational fires at Khe Sanh remained an isolated success.

There is no doubt that operational fires in Vietnam suffered from the numerous restrictions imposed during 1965 to 1968. Geographical sanctuaries, a flawed 'escalation plan', and a set of confusing and constraining rules of engagement hindered American attempts to impose their will upon the enemy⁴⁶. The war has become a rallying cry for those desiring increased military control over conflicts. Yet it is important not to over estimate what fires can accomplish.

⁴³ Westmoreland, 152

⁴⁴ Berman 149

⁴⁵ Peter Brush, "The Withdrawal from Khe Sanh", (http://www.thehistorynet.com/vietnam/articles/1997/0897_text.htm), 2

As the current Chief of Field Artillery, MG Strickland, recently stated, “We [fire supporters] must not oversell fires capabilities or our skills.”⁴⁷ Even in a perfect world, firepower alone could not have won in Vietnam. Korea’s barren hills, conventional campaign, and isolation from the global information environment let Ridgeway use fires to achieve limited victory within the marginally diminished battlespace allotted to him by his superiors. Conversely, Vietnam’s lush foliage, unconventional warfare, and constant scrutiny by the media stymied Westmoreland and Sharp in their efforts to use fires to fight to a stalemate within the nagging, often debilitating bounds imposed on them by Washington.

⁴⁶ General George Eade, “Reflections on Air Power in the Vietnam War”, *Air University Review*, (November-December 1973) 5

⁴⁷ Major General Toney Stricklin, “We Have Work To Do”, *Field Artillery Journal*, (March-April 2001), 1

BEIRUT 1982-83

Fifteen years after strategic restrictions hindered operational fires in Vietnam, the United States intervened in Lebanon. The Reagan administration placed American Marines, Sailors, and Soldiers in harm's way without a coherent end state, plan, or sufficient means to accomplish the vague tasks assigned⁴⁸. This lack of synergy between the strategic, operational, and tactical levels of war ultimately resulted in over three hundred casualties and an embarrassing withdrawal by the United States from Beirut. Operational fires did not effectively support the force commander, as the senior American leadership failed to provide guidance on what fires were to accomplish.

The strategic setting for the Lebanese intervention was more convoluted than Vietnam. States, states within states, faction, and armed groups all competed to push their agenda, frequently at the point of a gun. These various groups included the Lebanese government, the Christian Phalange, the Druse militia, Israel, the Palestine Liberation Organization (PLO), and Syria. The United States supported the Lebanese government. American anger over the IDF invasion as well as the need to portray neutrality hampered the traditionally close U.S. ties with Israel. Syria, Lebanon's Eastern neighbor, led the opposition both directly and through the various Islamic groups it influenced. Into this mix plunged the Multinational

⁴⁸ Hussein Sirriyeh, "Lebanon: Dimensions of Conflict", London, International Institute for Strategic Studies, 1989 54

Force (MNF) composed of American Marines, French Legionnaires, and an Italian contingent.⁴⁹ As the operation unfolded, the United States found itself trying to prop up the least legitimate and weakest group, the government of Lebanon. However, unlike in Korea in 1950, it refused to commit sufficient troops and maneuver assets required to do this. Yet, after making this decision, the United States did not withdraw the vulnerable Marines attempting to accomplish confused and changing national objectives with very limited means. The avowed strategic end state, a cohesive government in Lebanon and all foreign players removed, was unattainable.⁵⁰

Israel precipitated the immediate crisis to which the Reagan administration responded in June of 1982 when it invaded Lebanon, its neighbor to the north. The IDF occupied the southern half of the country and the outskirts of its capital, Beirut, in order to drive the PLO out of Lebanon. It also defeated elements of the Syrian military. As the PLO retreated into Beirut, they occupied positions in and around civilian areas. The Israeli Defense Forces, (IDF), began bombarding the city with artillery and air strikes. The media portrayed the urban destruction wrought by this battle in the global information environment. World opinion soon forced Israel to agree to a controlled evacuation of the PLO from Beirut under the aegis of international monitors. The 32d Marine Amphibious Unit (MAU) was part of the force that performed this very controlled, limited mission in August of 1982. They and their Italian and French counterparts secured the PLO's

⁴⁹ Eric Hammel, *The Root*, New York, Harcourt Brace Jovanovich, 1985, 4

⁵⁰ Robert McFarlane, "Special Trust", Cadell & Davies, New York 1994, 246

evacuation without serious incidents. When the Marines re-embarked on their ships on September 10, 1982, it appeared that the Reagan administration had averted a crisis. Indeed the President declared that the U.S. had “No strategic interest in the Lebanon.”⁵¹

This attempt to return Lebanon to the foreign policy back burner failed when Christian Phalange militiamen massacred hundreds of Palestinian refugees in camps near Israeli units on September 18. The United States and its allies immediately reconstituted the MNF and landed in Beirut again with the 32d MAU as its American contingent on September 29. Unfortunately, the mission this time was not as clear-cut as it was for the PLO evacuation. Motivated more by a sense of “something must be done” than by any strategic need, objectives were fuzzy at best. According to a John Kelly, a former U.S. Ambassador to Lebanon,

There was no quick political plan or military objective that would pull Lebanon out of its agony. A military presence was a visible means of expressing our continued concern for Lebanon. There was hope that the MNF would stabilize the situation, but how it was to do so, none could say. Weinberger wrote; “...this MNF would not have any mission that could be defined”⁵²

In the end, the derived mission statement directed the MNF to establish an interposition force to create an environment enabling the Lebanese Army to carry out its responsibilities, assist the Lebanese government in ensuring the safety of persons in the area, bring the violence there to an end, and facilitate and restore the Lebanese government’s authority and sovereignty over the Beirut area.⁵³

⁵¹ Hammel, 33

⁵² John H. Kelly, “ Lebanon: 1982-1984”, <http://www.rand.org/publications/CF/CF129/CF-129.chapter6.html>, 5

⁵³ Sirriyeh, 54

For the U.S. Marines and their French and Italian counterparts, this translated into divvying Beirut into three sectors of responsibility. The Marines drew the Beirut International Airport (BIA) and its immediate surroundings as their sector. Initially, all went well. The airport reopened to international traffic. The local residents were happy to have the Marines and the stability they represented in their neighborhoods. Beirut, which had recently echoed to the sounds of artillery shells and bombs, began to shed its war like atmosphere. The biggest problems for the Americans did not lie with the Lebanese forces, but with the IDF units that abutted the BIA perimeter. However, these problems were relatively minor turf issues and Marine units began to rotate in and out of the BIA cantonment. There seemed to be little need to display or use the firepower of the United States to back up its 1800 servicemen on the ground. This firepower included the field artillery battery organic to the MAU. The Marine Commander, Colonel Jim Mead, initially left his six howitzers afloat. He felt that the threat environment did not require Field Artillery or heavy weapons and used his artillery battery as an additional infantry company. The artillery pieces did not land until December of 1982.

Given this permissive environment, the ROE that the Marines landed with were initially adequate. The key points were that the rules limited the U.S. Forces to acts of self-defense, urged commanders to seek guidance from higher headquarters if possible, and said that U.S. units would not pursue hostile forces. “Hostile acts” were defined as an attack or use of force against the U.S. forces, other MNF soldiers, or LAF units operating with the U.S.⁵⁴ These ROE,

⁵⁴ “Report of the DOD Commission on Beirut International Airport Terrorist Act, October”, 1983, 20 December, 1983, 48

particularly the guidance and non-pursuit clauses, had the effect of slowing the U.S. response to provocations as actions were vetted by the chain of command

The threat environment changed in the summer of 1983, almost a year after the initial Marine landings. Beirut's power blocs were increasingly restive as they saw the President of Lebanon, Amin Gemeyal, as incapable of dealing with the factionalism that split the country along religious lines. Unfortunately, for the United States' forces in country, the various factions increasingly viewed the U.S. as an ally of Gemeyal and the perception of American neutrality slipped away. This erosion began in December of 1982 when the Marines began training Lebanese Armed Forces (LAF) soldiers. The destruction of the American Embassy in April 1983 marked an escalation of anti American violence. U.S. impartiality was further attrited when Reagan misspoke at a press conference in May 1983 and changed the Marines mission to one of providing internal security for the Gemeyal Government.⁵⁵ However, it was the IDF withdrawal from Lebanon beginning August 28 1983 that restored Beirut to a war zone. When the IDF withdrew, they created a power vacuum that the various Lebanese groups rushed to fill. The government and the American forces linked with it stood in the way of most of these groups and quickly became targets for their guns.

The Marines occupying the BIA in August of 1983 were assigned to the 24th MAU. They had first entered Beirut in May of that year when they conducted a relief in place of the 22d MAU. The units were very similar, the only notable exception being six new M198 155mm towed howitzers that replaced the smaller 105mm howitzers previously used by Marine batteries. This weapon gave the

MAU commander, Colonel Timothy Geraghty, a thirty-kilometer range with a hundred pound shell. These guns communicated with the Army Target Acquisition Radar based with the Marines at BIA. Other assets available included five-inch naval gunfire with a limited ability to range inland, two attack helicopters, and air support from a single aircraft carrier. This firepower gave the U.S. military the ability to attack targets throughout Lebanon, but did not give it the ability to dominate the area of operations.⁵⁶ Potentially opposing this force were over 600 artillery tubes controlled by the Druse militia within range of BIA, and a Syrian Air Defense system.

The inability to dominate the battlefield became apparent as soon as the IDF withdrawal began. The Druse began shelling BIA on 10 August with artillery, mortars, and rockets. Ostensibly, they aimed the shells at the LAF soldiers in training camps adjacent to the airport. This shelling placed the Marines under fire, closed the airport, and made clear that the Druse would resist any attempt by the LAF to expand its control from the capitol into the nearby Shouf mountains.⁵⁷ In response, the U.S. attempted to preserve the shredded fig leaf of its peacekeeping mission and did not return fire. It was not until indirect fire killed two marines on August 29 that the artillery battery was permitted to fire six rounds. Its fire mission was successful, destroying a rocket battery.

At this point, U.S. policy makers missed a critical change in the strategic environment. U.S. forces were without doubt no longer peacekeepers; they were engaged in a war with allies, the Lebanese government, and enemies, the Druse

⁵⁵ Hammel, 83

⁵⁶ Ibid, 178

militia and other Islamic groups backed by Syria. Ignoring this fact placed the 1800 servicemen on the ground in increasing peril. While the strategic environment changed, the operational guidance did not. The original ROE remained in force for units at BIA, as U.S. forces were to only fire in self-defense. No new forces landed to give the commander a maneuver option for protecting his men or for implementing the U.S. strategic end state. The only option to end the shelling to cease was a fires' based one. However, in the absence of a realistic strategic vision, it was very difficult to formulate an operational fires campaign.

The chain of command for the forces in Lebanon ran from the National Command Authority (NCA), Reagan and Secretary of Defense Caspar Weinberger, through the Commander in Chief in Europe (USCINCEUR) and continued down through the European Command Naval Component to the Commander of Sixth Fleet. This commander issued orders to the Commander, U.S. Forces Lebanon, who in turn commanded Colonel Geraghty. No one in the chain of command between Reagan and Colonel Geraghty acted to provide a coherent plan for fires. What replaced a coherent plan was a series of isolated fire missions. None of these fire missions had sufficient weight to achieve any operational effects as defined by Dr. Vego. The fact that the NCA and their immediate representatives developed and approved these missions in no way helped tie the strategic ends and tactical means together in an operational plan.

In fact, the NCA's representative in Lebanon in September of 1983, ex - Marine Lieutenant Colonel Robert McFarlane, demonstrated a complete lack of understanding the situation. He convinced the President to authorize Colonel

⁵⁷ "Report of the DOD Commission, 31

Geraghty to request fires on behalf of the LAF battling with the Druse over a key village named Suq al-Gharb on 12 September⁵⁸. Geraghty, knowing that small amounts of artillery would accomplish little except cement his Marines in the minds of the Muslims as the enemy, refused to call for fire for a week. However, on 19 September, he relented amid growing political pressure from Washington. The Reagan administration, facing a War Powers Act challenge from Congress, needed to demonstrate that the Lebanese situation was more serious than it really was⁵⁹. Suddenly, reports surfaced that the Druse were about to overrun the LAF at Suq al-Gharb. Geraghty, faced with these reports, issued the requisite orders. Three U.S. ships fired over 350 rounds of in support of the LAF defenders with U.S. personnel adjusting the shells. This represented an escalation in the conflict from the proportional response of a few rounds fired back at what could be dismissed as “accidental” impacts on the airport. The United States was at war in Beirut on the side of the Lebanese government.⁶⁰ Events of the next few days confirmed this with the arrival of the battleship *New Jersey* off the coast. The refurbished battleship brought guns capable of hurling one-ton shells deep into the hills surrounding Beirut. However, policy makers still refused to acknowledge that in order for fires to accomplish their objectives, a comprehensive plan was required to support the strategic end state.

An appropriate strategy would have been to use fires to destroy or neutralize the Druse’ critical functions and facilities, especially their artillery, and to isolate Beirut from their gun positions by making it untenable for guns to exist in range of

⁵⁸ McFarlane, 251

⁵⁹ Sirriyeh, 55

the city. McFarlane, representing Reagan, did not direct this. Instead, he focused on demonstrating “evidence of our resolve”⁶¹ to Syrian President Assad, the perceived controller of the Druse. McFarlane informed Assad that the *New Jersey* had arrived and expected him to draw the conclusion that the Druse should stop fighting and that Syrian forces should leave Lebanon. Assad did not take the hint. The Druse bombardment of the airfield increased, as did attacks from Islamic groups bordering BIA. From the end of September to October 22, the Marines in Beirut hunkered down, responded in kind to small arms fire, and wished for a response like the one their predecessors at Khe Sanh had in Operation Niagara. They suffered casualties, but their plight did not change the strategic policy

This situation changed again on 23 October 1983, when a truck bomb devastated the headquarters building at BIA, killing 241 men. This attack, conducted by Islamic terrorists supported by Iran, marked the beginning of the end for U.S. military involvement in Lebanon. An ineffective carrier air strike on 4 December against Syrian anti aircraft positions failed to halt the disintegration of the Lebanese Armed Forces and U.S. policy. The NCA withdrew the Marines from their exposed positions in Beirut in February 1984. Simultaneously, in an attempt to show that we were not abandoning Lebanon, Reagan stated that:

...to enhance the safety of American and other MNF personnel in Lebanon, I have authorized U.S. naval forces, under the existing mandate of the MNF, to provide naval gunfire and air support against any units firing into greater Beirut from parts of Lebanon controlled by Syria, as well as against any units directly attacking American or MNF personnel and facilities. Those who conduct these attacks will no longer have

⁶⁰ David Evans, “Navy-Marine Corps Team in Lebanon” *Proceedings* (May 1984): 137

⁶¹ McFarlane, 253

sanctuary from which to bombard Beirut at will. We will stand firm to deter those who seek to influence Lebanon's future by intimidation.⁶²

The day after the President's statement finally giving commanders a clear mission for fires to accomplish, the *New Jersey* fired the heaviest naval gunfire bombardment since the Korean War against Druse artillery emplacements. However, this was too little, too late. By the end of February, the 22d MAU was completely redeployed onto ships off the coast. President Gemayel recognized the new realities when he almost immediately discharged his cabinet and began the process of accommodating Syrian desires.⁶³

The Lebanese intervention was initially designed as a classic peacekeeping mission. The evacuation of the PLO required little in the way of heavy weapons and the new Reagan administration correctly did not anticipate combat action much less the need to conduct operational level campaigns with maneuver and fires effort component. Strategists properly configured the ROE and force structure to conduct the mission in the existing battlespace. When that battlespace changed due to an increased threat, the restraints failed to loosen to meet the new challenge. Additional forces and less restrictive ROE were required to enable the commanders on the ground to meet their strategic end state. By the time the forces and ROE required to deal with the original shelling were in place, the situation had badly deteriorated. The arrival of the battleship *New Jersey*, an additional carrier group, and the President's 8 February statement were not enough to salvage the

⁶² Ronald Reagan, "Statement on the Situation in Lebanon
<http://www.reagan.utexas.edu/resource/speeches/1984/20784d.htm>, 1

⁶³ Paul E. Salem, "Superpowers and Small States: an Overview of American-Lebanese Relations", *The Beirut Review* (No.5, Spring 1993), 6

situation. Islamic forces were in ascendancy, and only the commitment of the U.S. to a major theater war with Syria could have averted their victory. For the United States, other global commitments, as well as the memory of Vietnam precluded this as a realistic option.

CONCLUSION

Carl von Clausewitz clearly understood policy's relationship to war. He argued, "...the political aim remains the first consideration. Policy, then, will permeate all military operations, and, in so far as their violent nature will admit, it will have a continuous influence on them."⁶⁴ Unfortunately, after World War II, policy makers did not thoroughly learn how to implement this permeation, especially as it related to restrictions on operational fires. Of the three examples discussed, only Korea demonstrated how properly designed restraints can satisfy the needs of policy makers at the strategic level while still allowing the operational commander to accomplish his mission by achieving firepower dominance over the enemy. In Korea, Ridgeway bled the Chinese Army to a draw with massive amounts of artillery and air power. This satisfied his political superiors' desire to keep Korea from igniting World War III on the Asian mainland. His reliance on fires also allowed the U.S. government to focus on their critical issue of manning NATO in response to the Soviet threat.

The relatively primitive state of technology in 1951 aided Ridgeway's efforts. Despite the presence of journalists and photographers on the battlefield, Ridgeway did not have to contend with instant coverage of his actions, nor did the enemy effectively use the media to attempt to sway American public opinion. Fires are often blunt, imprecise tools and the collateral damage they create can obscure the task achieved. When technology instantly portrays fires' damage but not their effect as it did in Vietnam and Lebanon to the American domestic audience, policy

makers like McNamara, Johnson, and McFarlane feel compelled to minimize the potential for harm. Unfortunately, in the course of doing so, they can easily prevent the field commander from attaining critical objectives. Westmoreland's task was made much more difficult by this strategic daintiness and reluctance to accept potential damage to innocent people and places. Geraghty and the Marines in Beirut also suffered from this attitude until it was too late to reach the required end state. The ROE in effect required the Marines to call for fire one mission at a time instead of in wholesale lots. The improperly conceived and too slowly evolving restraints hindered and prevented achieving strategic goals.

This conflict between avoiding well-publicized civilian casualties while not allowing the enemy sanctuary an increasingly urbanized world continues. Precision-guided munitions offered hope to frustrated fire supporters when they destroyed the Thanh Hoa and Paul Doumer bridges in Vietnam, reduced the risk to American aircrews, and still satisfied the strategic need to avoid using heavy bombers. Yet, less than fifteen years later, these munitions did not offer a solution to the dilemma posed by Druse gunners in Lebanon supported by a mediocre air defense system. To policy makers, the loss of one pilot and the capture by the Syrian's of another in the single air strike conducted was too high a price to pay to use operational fires.⁶⁵

Along with speeding pictures and reports from the battlefield, improved technology has enabled political leaders to keep their operational commanders on a shorter leash. MacArthur first experienced this when improved air travel made it

⁶⁴ Carl von Clausewitz, *On War*, (Princeton, New Jersey: Princeton University Press, 1976), 87

⁶⁵ McFarlane, 272

possible for emissaries from the Joint Chiefs of Staff to easily arrive at his headquarters for briefings on operations in Korea⁶⁶. The leash became a noose when Johnson was able to demand updates every two hours on the fighting at Khe Sanh⁶⁷. The noose tightened and hung U.S. forces in Lebanon when the President's "special envoy" started directing a regimental commander on where to call for fire⁶⁸. Strategic policy makers must recognize that just because technology allows them to control operations, it does not mean that they should control operational fires. Operational fires are too important an element the military campaigns that support strategic end states for each new administration to re-learn these lessons. As the Beirut and Vietnam experience demonstrated, not properly committing the forces and thought necessary to shape the battlefield can doom national policy to failure.

One of the premier schools for developing campaigns is the U.S. Army's School of Advanced Military Studies. Its graduates assist commanders and policy makers in creating the conditions required to achieve the strategic end state. Unfortunately, the role of strategic constraints is often ignored in the conduct of the student's training. Restraints, in the students' eyes, must be based on some form of logic to be valid. Regrettably, the logic that applies at the operational level may not be the logic that applies at the strategic level. Even worse, there may be flaws in the national strategic logic upon which military planners will have to build a workable operational fires concept. American soldiers are used to the idea of using firepower, not men, to bludgeon the enemy. It is an excellent way for

⁶⁶ Alexander, 171

⁶⁷ Berman, 142

a rich, powerful democracy to make war. However, absent a unique environment like the sparsely populated desert setting of the Gulf War, the trend since World War II is for the national level policy makers to rein in the military's ability to destroy the enemy. Students must become comfortable with these politically imposed shackles and develop methods to punish the enemy while playing by what can appear to be capricious rules.

One method for accomplishing this is to focus on the effects, rather than the means, of operational fires. Dr. Vego's description of the missions of operational fires: facilitating operational maneuver of the force, preventing or disrupting operational maneuver of the enemy force, isolating the area of operations, preventing the arrival of enemy reinforcements, destroying or neutralizing the enemy operational reserve or the enemy's critical functions and facilities, and deceiving the enemy as to the sector of main attack will help planners avoid the trap laid by strategic restraints. The goal is to correctly develop ROEs, battlefield geometry, and strategies that will aid, not stymie, future commander's campaigns. Planners must ask themselves how they can achieve his missions for operational fires while still operating within the restraints imposed. A successful example of this was Ridgeway's interdiction of the CCF supply lines within the confines of the Korean peninsula. Although this action did not live up to its name, Operation Strangle, and suffocate the enemy, it did weaken the CCF enough so that Korea was a strategic economy of force mission for the U.S. According to Vego's definition, this met the intent for operational fires by both isolating the area of operations and preventing the arrival of enemy reinforcements.

⁶⁸ Hammel, 220

Planners must also recognize when the restrictions placed on their operational fires make the mission unachievable and tell their superiors. In Vietnam, Westmoreland could not completely isolate the battlefield by fires with the tools and battlespace allotted. His intended target, the Ho Chi Minh trail, was too hard to destroy from the air. There were operational plans to remedy this situation by invading Laos and establishing blocking positions from which fires could have shut down many of the choke points along the trail. However, political consideration prevented this from occurring.⁶⁹

Colonel Geraghty and the Marines in Beirut faced a similar problem. In this case, it was an overly restrictive set of ROE rather than a geographic restriction that prevented them from neutralizing the enemy's artillery, a critical function. Every time the Druse bombarded the LAF forces around Beirut, the Lebanese government lost legitimacy. Removal of the enemy artillery could have provided an environment for survival of the Gemeyal regime. As in Vietnam, political restrictions made this an untenable course of action. Planners and commanders in Geraghty's chain of command failed to correctly assess and report higher the restriction's implications. This error of omission is one their future counterparts must not make.

⁶⁹ John Collins, "Going to Tchepone: OPLAN El Paso" *Joint Forces Quarterly* Washington, Autumn winter 1997-98: 129

BIBLIOGRAPHY

- "U.S. Navy Battleships - USS New Jersey (BB 62)."
[Http://www.chinfo.navy.mil/navpalib/ships/battleships/newjersey/bb62-nj.html](http://www.chinfo.navy.mil/navpalib/ships/battleships/newjersey/bb62-nj.html):23 April 2001.
- Alexander, Bevin. *Korea the First War We Lost*. New York: Hippocrene Books, 1986.
- Appleman, Roy. *Ridgeway Duels for Korea*. College Station: Texas A&M University Press, 1990.
- Bell, Kenneth. *100 Missions North*. Washington: Brassey's, 1993.
- Berman, Larry. *Lyndon Johnson's War*. New York: W.W. Norton & Company, 1989.
- Blair, Clay. *The Forgotten War*. New York: Doubleday, 1987.
- Brandon, Henry. *Anatomy of an Error*. Boston: Gambit, Inc., 1969.
- Brush, Peter. "The Withdrawal from Khe Sanh."
[Http://www.thehistorynet.com/Vietnam/articles/1997/0897_text.htm](http://www.thehistorynet.com/Vietnam/articles/1997/0897_text.htm):April 2001.
- von Clausewitz, Carl. *On War*. Princeton: Princeton University Press, 1976.
- Collins, John. "Going to Tchepone: OPLAN El Paso." *Joint Forces Quarterly* (Washington) (Autumn winter 1997-98): 118.
- Covington, Sally ed. *The Israeli Invasion of Lebanon Part II*. Leyli Sayegan ed. New York: Claremont Research and Publications, 1983.
- Cowdrey, Christian. "Shoot? Don't Shoot? Rules of Engagement in Peacekeeping Operations." Fort Leavenworth: School of Advanced Military Studies. 1994.
- Dorr, Robert. *The Korean Air War*. Warren Thompson. Osceola: Motorbooks, International, 1994.
- Drake, Ricky. "The Rules of Defeat." Maxwell Air Force Base: Air University Press. 1993.
- Drew Dennis. *Rolling Thunder 1965: Anatomy of Failure*. Maxwell Air Force Base: Air University Press, 1986.

- Evans, David. "Navy-Marine Corps Team in Lebanon." *Proceedings* (1984): 133.
- Futrell, Robert. *The United States Air Force in Korea 1950-1953*. Washington, D.C: U.S. Government Printing Office, 1983.
- Garrett, Jerry. "Strategic Airpower as Operational Fires.," Fort Leavenworth, Kansas, School of Advanced Military Studies. 1991.
- Gordon, Michael. "The Marine Corps in Lebanon-Is It an Operation in Search of a Mission?." *National Journal* (12 November, 1983): 2363.
- Graul, Charles. "Negotiation By Fire." Fort Leavenworth: Command and General Staff College. 1993.
- Griffith, Thomas Jr. "Air Pressure: Strategy for the New World Order?." *Airpower Journal* 8, 2 (Summer 94): 18.
- Guttman, Allen ed. *Korea and the Theory of Limited War*. Lexington, Massachusetts: D.C. Heath and Company, 1967.
- Hallenbeck, Ralph. *Military Force as an Instrument of U.S. Foreign Policy*. New York: Praeger, 1991.
- Hammel, Eric. *The Root*. New York: Harcourt Brace Jovanovich, 1985.
- Hammond, Charles. "Operational Fires and Unity of Command.," Fort Leavenworth: School of Advanced Military Studies. 1990.
- Hiro, Dilip. *Lebanon Fire and Embers*. New York: St. Martin's Press, 1992.
- Hoyt, Edwin. *The Bloody Road to Panmunjom*. New York: Stein and Day, 1985.
- James, D. Clayton. *The Years of MacArthur*. Vol. III. *Triumph and Disaster 1945-1964*. Boston: Houghton Mifflin Co., 1985.
- James, D. Clayton. "Command Crisis: MacArthur and the Korean War." *The Harmon Memorial Lectures* (United States Air Force Academy), 1982.
- Janes, William. "Operational Art in NATO." Fort Leavenworth: School of Advanced Military Studies. 1983.
- Kelly, John. Article. "Lebanon: 1982-1984."
[Http://www.rand.org/publications/CF/CF129/CF-129.chapter6.html](http://www.rand.org/publications/CF/CF129/CF-129.chapter6.html): RAND, January 22, 2001.

- Kelly, Thomas. "Operational Fires: Past, Present, and Future." Newport: Naval War College. 1995.
- Kolditz, Thomas. "Exploring the Conditions for Operational Fires." Fort Leavenworth: School of Advanced Military Studies. 1993.
- Laffin, John. *The War of Desperation*. London: Osprey Publishing, Ltd, 1985.
- Lambeth, Benjamin. *The Transformation of American Airpower*. Ithaca: Cornell University Press, 2000.
- Lutzker, Michael. "Presidential Decision Making in the Korean War: The British Perspective." *Presidential Studies Quarterly* 26, 4 (Fall, 1996): 978.
- MacDonald, Callum. *Korea: The War Before Vietnam*. New York: The Free Press, 1986.
- Martell, Paul. *Flawed Victory*. Trevor Dupuy. Fairfax, Virginia: HERO Books, 1986.
- Matthews, Lloyd. *Assessing the Vietnam War*. Dale Brown. Washington: Pergamon-Brassey's, 1987.
- Matthews, Lloyd. *The Political-Military Rivalry for Operational Control in U.S. Military Actions: A Soldier's Perspective*. Carlisle: Strategic Studies Institute, 1998.
- McFarlane, Robert. *Special Trust*. Zofia Smardz. New York: Cadell & Davies, 1994.
- Miller, John. *Korea 1951-1953*. Washington: U.S. Government Printing Office, 1956.
- Mossman, Billy. *United States Army in the Korean War*. Vol. III. *Ebb and Flow November 1950 - July 1951*, Washington: U.S. Government Printing Office, 1990.
- Nalty, Bernard. *Air Power and the Fight for Khe Sanh*. Washington: U.S. Government Printing Office, 1973.
- Parks, W. "Rules of Engagement: No More Vietnams." *Proceedings* (Annapolis) 117, 3 (March, 1991): 27.
- Petit, Michael. *Peacekeepers At War*. Boston: Faber and Faber, 1986.

- Pimlott, John. *Vietnam the Decisive Battles*. New York: MacMillan Publishing Company, 1990.
- Randolph, Stephen. "Rules of Engagement, Policy, and Military Effectiveness: The Ties That Bind." Maxwell Air Force Base: Air War College. 1993.
- Reagan, Ronald. Speech. "Statement on the Situation in Lebanon." English. [Http://www.reagan.utexas.edu/resources/speeches/1984/20784.htm](http://www.reagan.utexas.edu/resources/speeches/1984/20784.htm):23 April 2001.
- Rees, David. *Korea: The Limited War*. Baltimore: Penguin Books, 1964.
- Report of the DOD Commission on Beirut International Airport Terrorist Act, October*. By Admiral Robert L. J. Long, Chairman. Washington: U.S. Government Printing Office. 1984.
- Richman, Sheldon. Article. "The United States in Lebanon: A Case for Disengagement." English. [Http://www.cato.org/pubs/pas/pa035.html](http://www.cato.org/pubs/pas/pa035.html): Cato Institute, 24 April 01.
- Salem, P. Article. "The Israeli Option: 1981-1982." English. [Http://www.lcps-lebanon.org/pub/breview/br5/psalemb5pt2.html](http://www.lcps-lebanon.org/pub/breview/br5/psalemb5pt2.html): Beirut Review, 24 April 2001.
- Schnabel, James. *United States Army in the Korean War. Vol. I. Policy and Direction: The First Year*, Washington: U.S. Government Printing Office, 1972.
- Sharp, U.S.G. *Report on the War in Vietnam*. Washington: U.S. Government Printing Office, 1968.
- Shore, Moyers. *The Battle For Khe Sanh*. Washington: Headquarters, U.S. Marine Corps, 1969.
- Sirriyeh, Hussein. *Lebanon: Dimensions of Conflict*. London: Brassey's, 1989.
- Spiller, Roger. *"Not War, But Like War": The American Intervention in Lebanon*. Fort Leavenworth: Combat Studies Institute, 1981.
- Stanton, Shelby. *U.S. Ground Forces in Vietnam, 1965-1973*. Novato, Ca: Presidio Press, 1985.
- Stricklin, Tony. "We Have Work To Do." *FA Journal* (Fort Sill) VI, 2 (March-April 2001): 1.

- Thompson, James. *Rolling Thunder Understanding Policy and Program Failure*. Chapel Hill: University of North Carolina Press, 1980.
- Vego, Milan. "The Theater Functional Area.," Newport: United States Naval War College. 1995.
- Waddell, Dewey. *The Tale of Two Bridges*. Norm Wood. Indianapolis: The Bobbs-Merrill Company, 1978.
- Waxman, Matthew. *International Law and the Politics of Urban Air Operations*. Santa Monica: RAND, 2000.
- Weigley, Russell. *The American Way of War*. Bloomington: Indiana University Press, 1973.
- Wendt, Diego. "Using a Sledgehammer to Kill a Gnat."
[Http://www.airpower.maxwell.af.mil/airchronicles/apj/4sum90.html](http://www.airpower.maxwell.af.mil/airchronicles/apj/4sum90.html): 12 Dec 2001.